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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,629	06/02/2006	Olivier Guedon	187842/US	3950
25763	7590	01/25/2008	EXAMINER	
DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT SUITE 1500 50 SOUTH SIXTH STREET MINNEAPOLIS, MN 55402-1498			SCHILLER, ALINA	
		ART UNIT	PAPER NUMBER	
		3671		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/581,629	GUEDON, OLIVIER	
	<b>Examiner</b>	<b>Art Unit</b>	
	ALINA SCHILLER	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-26 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>9/11/2006</u>	6) <input type="checkbox"/> Other: ____ .

## DETAILED ACTION

### ***Specification***

1. The disclosure is objected to because of the following informalities: the proper headings ("Field of Invention", "Background", "Summary", etc.) are missing.

Appropriate correction is required.

### ***Claim Objections***

2. Claims 5-7 and 20-22 are objected to because of the following informalities: use of metric (SI) units should be followed by the equivalent English units (MPEP 608.01[R-5]IV). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 3, 5-7, 14, 19 and 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

5. Regarding claim 3, the phrase "e.g." (line 3) renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Regarding claims 5-7, the phrase "preferably" (lines 3, 3, 3 respectively) renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
7. Regarding claims 14 and 19, the phrase "advantageously" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
8. Regarding claim 21, the phrase "typically" (line 3) renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. **Claims 1 and 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Allain et al. 2006/0228177.**

Regarding claim 1, Allain discloses a lifting barrier (Figs. 1 and 3) for controlling the passage on a traffic lane (Abstract), characterized by the fact that it comprises a string rail (100) in composite material ([0052], lines 1-2).

Regarding claim 23, Allain discloses that the string rail is borne by a stirrup (230) rotatably mounted around a horizontal axis (202) on a post (300) ([0031]).

Regarding claim 24, Allain discloses that the string rail is rotatably mounted around a vertical axis (102), on the stirrup ([0032]).

Regarding claim 25, Allain discloses that the string rail is supported by the stirrup, by a clamping system (234, 232, 222).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 2, 10, 11, 12, 13, 15, 16, 17, 20, and 21 are rejected under 35 U.S.C.**

**103(a) as being unpatentable over Allain et al 2006/0228177 in view of Rothschild 5,293,716.**

Regarding claim 2, Allain discloses a barrier made of composite material as previously set forth, but remains silent as to the barrier comprising a rectilinear central tube with a circular cross-section. Rothschild teaches a barrier comprising a rectilinear central tube with a circular cross-section (Fig. 2, Abstract), which is light yet sturdy (col. 1, lines 10-11), safe to operate thereby preventing injury (col. 1, lines 41-42), strong enough to resist normal wear and tear, inexpensive and easy to manufacture (col. 2,

lines 15-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier of Allain to comprise a rectilinear central tube with a circular cross-section, similar to that of Rothschild, in order to obtain a light yet sturdy barrier, which is safe to operate thereby preventing injury, strong enough to resist normal wear and tear, inexpensive, and easy to manufacture, as taught by Rothschild.

Regarding claims 10 and 17, the combination of Allen and Rothschild above would result in a central tube covered with a protected sleeve or an external cover (20, Fig. 2 of Rothschild; Abstract of Rothschild).

Regarding claim 11, Rothschild discloses that the protective sleeve is made in expanded polystyrene (col. 1, line 50; col. 2, lines 3-5).

Regarding claims 12 and 13 the examiner takes official notice that it is old and well known to provide coverings for cylindrical structures in the form of molds using half shells, it would have been well within the skill of those in this art to use this known method to provide the outer protective cover as an alternative means of providing the cover.

Regarding claim 15, Rothschild discloses that the sleeve is covered with a sheath (22, Figs. 2 and 3) having the function of holding the elements in place which make up the sleeve, even in the case of deterioration of the latter ?(col. 1, line 50; col. 2, line 7 – it's for protection).

Regarding claim 16, Rothschild discloses that the sheath is made of plastic (col. 2, line 7), which is considered to meet the limitation of heat-shrinkable polyethylene in claim 16.

Regarding claim 20, the combination of Allen and Rothschild discloses a barrier as previously set forth, but fails to disclose that the external diameter of the sleeve is of the order of 100 mm. It would have been obvious matter of design choice to modify the barrier of Allen as modified by Rothschild to have the external diameter of the sleeve of the order of 100 mm, since applicant has not disclosed that having this specific length solves any stated problem or provides any unexpected results, and it appears that the apparatus would perform equally well with this length. The examiner notes regarding the limitation of the order of 100 mm that in *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (see MPEP 2144.04 (IV)).

Regarding claim 21 as best understood, Rothschild discloses that the thickness of the sleeve is about  $\frac{1}{2}$ " (=50.8 mm) (col.2, line 6), which is larger than 50 mm, which is considered to meet the limitation of being larger than 50 mm, typically of the order of 60 mm in claim 21.

**Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allain et al 2006/0228177 in view of Rothschild 5,293,716, and further in view of Reynolds, Jr. et al 7,160,409.**

Regarding claim 3 as best understood, the combination of Allain and Rothschild above discloses a barrier as previously set forth, but fails to disclose that it comprises a central tube made on the basis of 55 to 65% by weight of yarns of glass fibers, 45 to 35% by weight of yarns of carbon fibers and resin. Reynolds teaches that a tube made of yarns of glass fibers, yarns of carbon fibers and resin is well known in the art (col. 1, lines 20-40), also a tube including yarns of glass and carbon fiber each making up about 50% by weight of the composite material (col. 6, lines 49-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier of Allain to comprise a central tube made on the basis of yarns of glass fibers, yarns of carbon fibers and resin, since this is well known in the art, as taught by Reynolds. Further, one skilled in the art would readily envision other combinations of weights of yarns of glass and carbon fiber, such as 55 to 65% by weight of yarns of glass fibers, and 45 to 35% by weight of yarns of carbon fibers, since this would involve only routine skill in the art, depending on the mechanical requirements for the finished tubing.

**Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allain et al 2006/0228177 in view of Rothschild 5,293,716, and further in view of Goldsworthy et al 3,769,127.**

Regarding claim 4, the combination of Allain and Rothschild above discloses a

barrier as previously set forth, but fails to disclose that the central tube consist of:

- an internal layer formed with yarns of fibers, said yarns being positioned longitudinally and parallel to each other,
- a central layer formed with yarns of fibers, angularly orientated as a helix relatively to the longitudinal axis of the tube,
- an external layer formed with yarns of fibers, said yarns being positioned longitudinally and parallel to each other, said internal, central, and external layers being obtained simultaneously and polymerized together in an epoxy resin so as to form a single-piece composite tube.

The examiner notes that the phrase “said internal, central, and external layers being obtained simultaneously and polymerized together in an epoxy resin so as to form a single-piece composite tube” is a process limitation. Claim 4 is considered to be a product-by process claim, and the examiner notes that it has been held that even though product - by process claims are limited by and defined by the process, determination of patentability is based on the product itself. Additionally, the patentability of a product does not depend on its method of production. If the product in the product - by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In Re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) (see MPEP 2113).

Goldsworthy teaches that it is well known in the art to manufacture tubes consisting of any combinations and numbers of layers formed with yarns of fibers positioned longitudinally and parallel with each other, and layers formed with yarns of

fibers angularly oriented as a helix relatively to the longitudinal axis of the tube, depending on the desired resulted product (col. 6, lines 66-68; col. 7, lines 1-16; col. 11, lines 35-50; col. 12, lines 3-34; 47-52). Therefore, one skilled in the art would readily envision any combinations, such as a combination of an internal layer formed with yarns of fibers, said yarns being positioned longitudinally and parallel to each other; a central layer formed with yarns of fibers, angularly orientated as a helix relatively to the longitudinal axis of the tube; and an external layer formed with yarns of fibers, said yarns being positioned longitudinally and parallel to each other, since it is well known in the art to manufacture this kind of tubes, and would involve only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier of Allain as modified by Rothschild to have the central tube consisting of an internal layer formed with yarns of fibers, said yarns being positioned longitudinally and parallel to each other; a central layer formed with yarns of fibers, angularly orientated as a helix relatively to the longitudinal axis of the tube; and an external layer formed with yarns of fibers, said yarns being positioned longitudinally and parallel to each other, since the manufacture of these tubes is well known in the art and depends on the desired product, as taught by Goldsworthy.

Regarding claims 5-7 as best understood, the combination above discloses the claimed invention except for the internal layer of the central tube being formed with glass fiber yarns with a linear weight between 60 and 70 g/ml, preferably 67 g/ml; the central layer of the tube being formed with glass fiber yarns with a linear weight between 50 and 60 g/ml, preferably 52 g/ml; and the external layer of the tube being

formed with carbon fiber yarns with a linear weight between 85 and 95 g/ml, preferably 90 g/ml. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Allain as modified by Rothschild and Goldsworthy to have the internal layer of the central tube formed with glass fiber yarns with a linear weight between 60 and 70 g/ml, preferably 67 g/ml; the central layer of the tube formed with glass fiber yarns with a linear weight between 50 and 60 g/ml, preferably 52 g/ml; and the external layer of the tube being formed with carbon fiber yarns with a linear weight between 85 and 95 g/ml, preferably 90 g/ml, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (MPEP 2144.05[R5] II A).

Regarding claims 8 and 9, Goldsworthy discloses that it is well known in the art to have a helix, the tangent of which is orientated by an angle between 10 and 85° relatively to the longitudinal axis of the tube (col. 5, lines 63-68). If a range of 60 to 80° is set, it automatically meets the limitation in claim 8; if an angle of 75° is set, it automatically meets the limitation in claim 9.

**Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allain et al 2006/0228177 in view of Rothschild 5,293,716, as applied to claim 10 above, and further in view of Sutton et al 5,965,249.**

Regarding claim 14 as best understood, Allain as modified by Rothschild discloses a barrier as previously set forth, but fails to disclose that the sleeve is held on the central tube by bonding, advantageously by means of a silicone adhesive. Sutton

teaches that it is well known to provide composite materials (col. 5, lines 18-19), which in tube or other forms, may be adhesively bonded (col. 5, lines 7-10), in order to yield the materials with sufficient mechanical strength and integrity to provide good performance characteristics (col. 5, lines 13-15), and states that the choice of adhesive can vary and is dictated by the needs (col. 12, lines 35-38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier of Allain as modified by Rothschild to have the sleeve held on the central tube by adhesively bonding, in order to yield the materials with sufficient mechanical strength and integrity to provide good performance characteristics, as taught by Sutton. Further, since Sutton states that the choice of adhesive can vary, it would be obvious to one skilled in the art to use silicone adhesive, which is a favorite type of glue well known in the art.

**Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allain et al 2006/0228177 in view of Rothschild, as applied to claim 17 above, and further in view of Kern et al 2006/0228177.**

Allain as modified by Rothschild discloses a barrier as set forth above, but fails to disclose that that cover consists of PVC-coated polyester fabric. Kern teaches that it is well known in the art to have a cover consisting of PVC-coated polyester fabric (col. 5, lines 7-9), to provide sufficient toughness, flexibility and compliance, and impermeability of water and dirt (col. 5, lines 9-11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier of Allain as modified by Rothschild to have the cover consisting of PVC-coated polyester fabric,

similar to that of Kern, in order to provide sufficient toughness, flexibility and compliance, and impermeability of water and dirt, as taught by Kern.

**Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allain et al 2006/0228177 in view of Herd 5,044,300 and Rothschild 5,293,716.**

Regarding claim 19 as best understood, Allain discloses a barrier as previously described, but fails to disclose that the external surface of the string rail has strips with contrasted or alternating colors, advantageously at least partly reflective strips. Herd teaches it is well known to have strips with contrasted or alternating colors on a barrier (Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier of Allain to have contrasted or alternating colors on the external surface of the string rail, as taught by Herd, in order to be better seen by the drivers. Rothschild teaches fluorescent paint (col. 2, lines 8-10) on the external surface of a barrier (col. 2, lines 8-10), in order to be highly visible at all times (col. 2, lines 9-10). Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the barrier of Allain as modified by Herd to be reflective, similar to that of Rothschild, to be highly visible at all times, as taught by Rothschild.

**Claims 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allain et al 2006/0228177.**

Regarding claim 22 Allen discloses the claimed invention except for the linear weight by meter of the whole of the string rail being less than 800 g/m. It would have

been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Allain to have the linear weight by meter of the whole of the string rail less than 800 g/m, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (MPEP 2144.05[R5] II A).

Regarding claim 26 the use of an alternative clamping system using two elastic blocks , as shoes, positioned below and above the rail , respectively, is seen as an obvious design alternative well within the skill of those in this art since elastic members are commonly employed in such clamping systems to allow limited movement without provide a stress point at the clamp.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALINA SCHILLER whose telephone number is (571)270-3088. The examiner can normally be reached on Mon-Fri, 7:30AM-4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571)272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas B Will/  
Supervisory Patent Examiner, Art Unit 3671

AS  
01/18/2008